

**AMENDMENTS TO THE CLAIMS**

Please amend the claims as set forth below in marked-up form. In addition, please cancel rejected claims 1 and 5, the subject matter of which is to be pursued in a separate continuation application.

1. (Cancelled)

2. (Currently Amended) A semiconductor device comprising:  
an emitter layer;  
a base layer; and  
a collector layer, the sum of a band gap and electron affinity of said emitter layer being  
larger than the sum of a band gap and electron affinity of said base layer,  
wherein said base layer contains Bi; and~~The semiconductor device according to claim 1,~~  
wherein  
said base layer contains GaAsBi.

3. (Currently Amended) A semiconductor device comprising:  
an emitter layer;  
a base layer; and  
a collector layer, the sum of a band gap and electron affinity of said emitter layer being  
larger than the sum of a band gap and electron affinity of said base layer,  
wherein said base layer contains Bi; and~~The semiconductor device according to claim 1,~~  
wherein  
said base layer contains GaAsBiN.

4. (Currently Amended) A semiconductor device comprising:  
an emitter layer;  
a base layer; and  
a collector layer, the sum of a band gap and electron affinity of said emitter layer being  
larger than the sum of a band gap and electron affinity of said base layer,

wherein said base layer contains Bi; and ~~The semiconductor device according to claim 1,~~  
wherein

    said base layer contains InPBi.

5. (Cancelled)

6. (Currently Amended) A semiconductor device comprising:

an emitter layer;

a base layer; and

a collector layer, the sum of a band gap and electron affinity of said emitter layer being  
larger than the sum of a band gap and electron affinity of said base layer,

wherein said base layer contains Bi; and ~~The semiconductor device according to claim 1,~~  
wherein

    said emitter layer includes at least one selected from the group consisting of GaAs,  
AlGaAs, InGaP, and InP

7. (Currently Amended) A semiconductor device comprising:

an emitter layer;

a base layer; and

a collector layer, the sum of a band gap and electron affinity of said emitter layer being  
larger than the sum of a band gap and electron affinity of said base layer,

wherein said base layer contains Bi; and ~~The semiconductor device according to claim 1,~~  
wherein

    said collector layer includes at least one selected from the group consisting of GaAs,  
InGaAs, and InP.